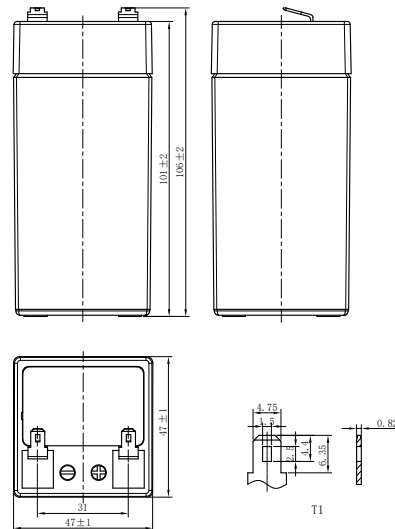




Product Image



Product Dimensions



Characteristics

|   |                           |   |
|---|---------------------------|---|
| Nominal Voltage                                   |                           | 4V  |
| Nominal Capacity (20 hour rate)                   |                           | 4Ah   |
| Capacity<br>25°C (77°F)                           | 10 hour rate (0.378A)     | 3.78Ah  |
|   | 5 hour rate (0.69A)       | 3.45Ah  |
|   | 1 hour rate (2.46A)       | 2.46Ah  |
| Internal Resistance                               | Full Charged Battery 25°C | ≤21mΩ   |
| Capacity affected by<br>Temperature<br>(10 hour)  | 40°C (104°F)              | 102%  |
|   | 25°C (77°F)               | 100%  |
|   | 0°C (32°F)                | 85%   |
| Self-Discharge<br>25°C (77°F)                     | after 3 month storage     | 90%   |
|   | after 6 month storage     | 80%   |
| Capacity  | after 12 month storage    | 62%   |
| Charge<br>(Constant<br>Voltage)<br>25°C<br>(77°F) | Float                     | Initial Charging Current Less than 1.2A<br>Voltage 4.50-4.90V |
|   | Cycle                     | Initial Charging Current Less than 1.2A<br>Voltage 4.80-5.00V |

Packaging

|                       |                 |               |
|-----------------------|-----------------|---------------|
| Battery<br>Dimensions | Length          | 47mm          |
|                       | Width           | 47mm          |
|                       | Height          | 101mm         |
|                       | Total<br>Height | 167mm         |
| Box<br>Dimensions     | Length          | 250mm         |
|                       | Width           | 203mm         |
|                       | Height          | 120mm         |
| Quantity Per Box      |                 | 20 PC per box |
| Net weight Per Cell   |                 | 0.48kg±15g    |
| Net weight Per Box    |                 | 9.60kg        |
| Gross Weight          |                 | 10.0kg        |

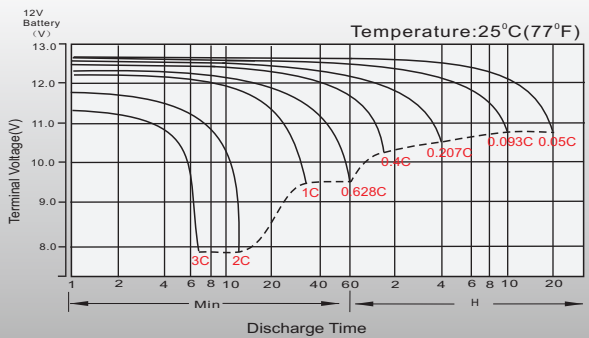
Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h    | 4h    | 5h    | 6h    | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1.85V/cell | 12.3 | 8.42  | 6.55  | 5.33  | 3.92  | 2.87  | 2.35 | 1.37 | 0.990 | 0.790 | 0.670 | 0.570 | 0.450 | 0.370 | 0.196 |
| 1.80V/cell | 13.2 | 8.93  | 6.88  | 5.54  | 4.05  | 2.95  | 2.41 | 1.39 | 1.00  | 0.800 | 0.680 | 0.580 | 0.460 | 0.375 | 0.198 |
| 1.75V/cell | 13.9 | 9.29  | 7.10  | 5.70  | 4.15  | 3.01  | 2.46 | 1.42 | 1.02  | 0.810 | 0.690 | 0.590 | 0.460 | 0.378 | 0.200 |
| 1.70V/cell | 14.6 | 9.70  | 7.34  | 5.86  | 4.26  | 3.08  | 2.50 | 1.44 | 1.04  | 0.820 | 0.700 | 0.600 | 0.470 | 0.382 | 0.202 |
| 1.65V/cell | 15.1 | 9.90  | 7.52  | 5.98  | 4.33  | 3.13  | 2.54 | 1.46 | 1.05  | 0.830 | 0.700 | 0.600 | 0.470 | 0.385 | 0.203 |
| 1.60V/cell | 16.0 | 10.4  | 7.78  | 6.16  | 4.45  | 3.20  | 2.60 | 1.49 | 1.06  | 0.840 | 0.720 | 0.610 | 0.480 | 0.390 | 0.205 |

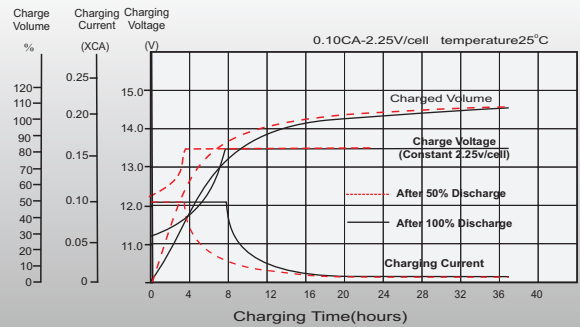
Constant Power Discharge (Watts/cell) at 25 °C (77°F)

| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h    | 10h   | 20h   |
|------------|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 1.85V/cell | 23.2 | 16.0  | 12.6  | 10.3  | 7.59  | 5.56  | 4.57 | 2.68 | 1.94 | 1.55 | 1.32 | 1.14 | 0.900 | 0.734 | 0.391 |
| 1.80V/cell | 24.8 | 16.9  | 13.1  | 10.6  | 7.78  | 5.69  | 4.67 | 2.72 | 1.97 | 1.57 | 1.34 | 1.15 | 0.910 | 0.744 | 0.396 |
| 1.75V/cell | 25.8 | 17.4  | 13.4  | 10.9  | 7.95  | 5.79  | 4.74 | 2.77 | 2.00 | 1.59 | 1.36 | 1.16 | 0.920 | 0.751 | 0.400 |
| 1.70V/cell | 26.8 | 18.0  | 13.8  | 11.1  | 8.12  | 5.90  | 4.82 | 2.80 | 2.02 | 1.61 | 1.37 | 1.18 | 0.930 | 0.758 | 0.403 |
| 1.65V/cell | 27.4 | 18.4  | 14.1  | 11.3  | 8.24  | 5.98  | 4.88 | 2.83 | 2.04 | 1.62 | 1.38 | 1.19 | 0.930 | 0.763 | 0.406 |
| 1.60V/cell | 28.6 | 18.9  | 14.5  | 11.6  | 8.42  | 6.09  | 4.97 | 2.87 | 2.07 | 1.65 | 1.40 | 1.20 | 0.950 | 0.772 | 0.411 |

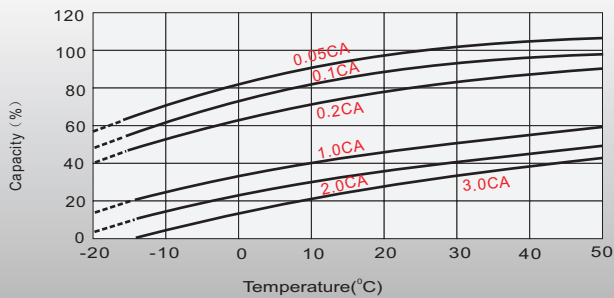
### Discharge Characteristics



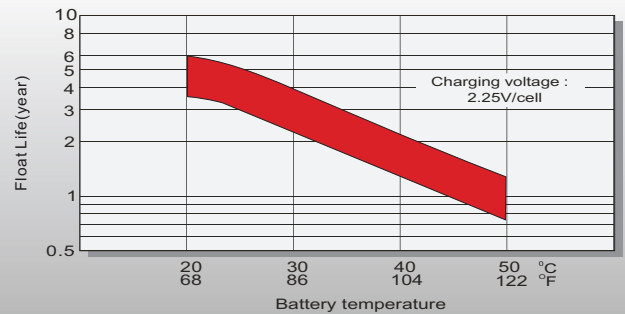
### Float Charging Characteristics



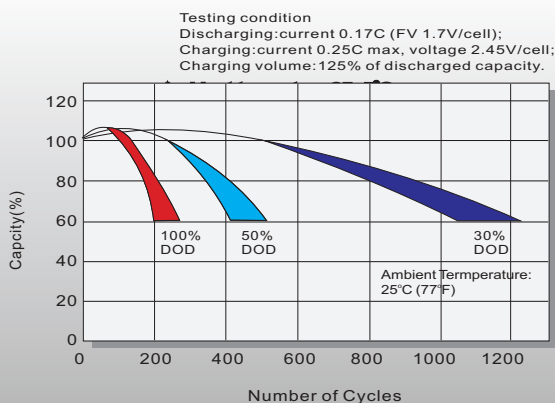
### Temperature Effects in Relation to Battery Capacity



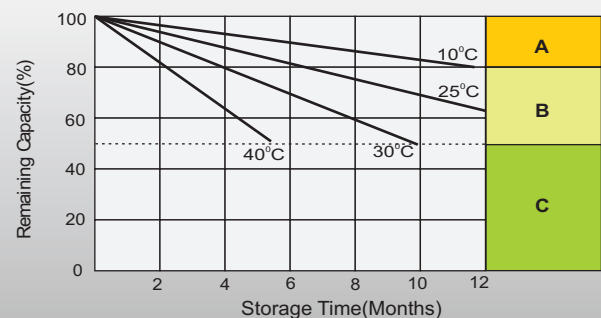
### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics



## Battery Construction

| Component    | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead           | ABS       | ABS   | Si-Rubber    | Copper   | Fiberglass | Sulfuric acid |